M18-3 Nickel-Plated Brass 18 mm Barrel Sensors

Original Instructions
p/n: 185178 Rev. E
10-Apr-26
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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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Chapter 1 Features

Next generation of self-contained DC-operated sensors



- Complete family of sensors, all housed in the popular 18 mm threaded metal barrel
- Economical photoelectric sensors for cost-sensitive and high-volume installations
- Powerful and bright visible red emitter beam for easy alignment and set-up
- Highly visible output and dual-function power and stability indicators
- Advanced ASIC technology is resistant to optical and electrical noise source
- Wide operating temperature range: –40 °C to +70 °C (–40 °F to +158 °F)
- Robust 250° adjustment potentiometer on select models

WARNING:

- **Do not use this device for personnel protection**
- Using this device for personnel protection could result in serious injury or death.
- This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A device failure or malfunction can cause either an energized (on) or de-energized (off) output condition.

Models

Emitter/receiver models

Model Number		Range	Output
M18-3NAEL-2M	Emitter	25 m (82 ft)	None
M18-3NAES-2M		25 m (82 ft) with adjustment	
M18-3NAEJ-Q8		25 m with beam inhibit	
M18-3VNRL-2M	Receiver	25 m (82 ft)	Complementary NPN
M18-3VPRL-2M			Complementary PNP
M18-3VNRS-2M		25 m (82 ft) with adjustment	Complementary NPN
M18-3VPRS-2M			Complementary PNP

Polarized retroreflective models

Model Number	Range	Output
M18-3VNLP-2M	6 m (19.7 ft) with BRT-84 reflector	Complementary NPN
M18-3VPLP-2M		Complementary PNP
M18-3VNLPC-2M	6 m (19.7 ft) with BRT-84 reflector, with adjustment	Complementary NPN
M18-3VPLPC-2M		Complementary PNP

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Retroreflective models

Model Number	Range	Output
M18-3VNLV-Q8	7.5 m (24.6 ft) with BRT-84 reflector, with adjustment	Complementary NPN
M18-3VPLV-2M		Complementary PNP

Diffuse models

Model Number	Range	Output
M18-3VPDL-2M	750 mm (29.5 in) with adjustment	Complementary PNP
M18-3VNDS-2M	300 mm (11.8 in) with adjustment	Complementary NPN
M18-3VPDS-2M		Complementary PNP

Fixed-field models

Model Number	Range	Output
M18-3VNFF30-2M	30 mm (1.2 in)	Complementary NPN
M18-3VPFF30-2M		Complementary PNP
M18-3VPFF50-Q8	50 mm (1.9 in)	Complementary PNP
M18-3VNFF75-2M	75 mm (2.9 in)	Complementary NPN
M18-3VPFF75-2M		Complementary PNP
M18-3VNFF100-2M	100 mm (3.9 in)	Complementary NPN
M18-3VPFF100-2M		Complementary PNP
M18-3VNFF150-2M	150 mm (5.9 in)	Complementary NPN
M18-3VPFF150-Q8		Complementary PNP

- Models ending in -2M have 2 m cables with flying leads.
- To order the 4-pin M12 integral quick disconnect model, add the suffix "Q8" to the model number. For example, M18-3VNDL-Q8.
- Models ending in -9M have 9 m cables with flying leads. Models ending in -Q3 have a 150 mm cable with a 4-pin M8 quick disconnect. Models ending in -Q5 have a 150 mm cable with a 4-pin M12 quick disconnect.

The following models are no longer available for order but are still covered by the information in this document.

Inactive models

Model	Range	Output
M18-3NAEL Emitter (all models except the -2M and -Q8 models)	25 m	None
M18-3NAEJ Emitter (all models except the -Q8 model)	25 m with beam inhibit	None
M18-3NAES Emitter (all models except the -2M and -Q8 models)	25 m with adjustment	None
M18-3VNRL Receiver (all models except the -2M and -Q8 models)	25 m	Complementary NPN
M18-3VPRL Receiver (all models except the -2M and -Q8 models)	25 m	Complementary PNP
M18-3VNRS Receiver (all models except the -2M and -Q8 models)	25 m with adjustment	Complementary NPN
M18-3VPRS Receiver (all models except the -2M and -Q8 models)	25 m with adjustment	Complementary PNP
M18-3VNLP (all models except the -2M and -Q8 models)	6 m with BRT-84 reflector	Complementary NPN
M18-3VPLP (all models except the -2M and -Q8 models)		Complementary PNP
M18-3VNLPC (all models except the -2M and -Q8 models)	6 m with BRT-84 reflector, with adjustment	Complementary NPN

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Model	Range	Output
M18-3VPLPC (all models except the -2M and -Q8 models)		Complementary PNP
M18-3VNLV (all models except the -Q8 model)	7.5 m with BRT-84 reflector, with adjustment	Complementary NPN
M18-3VPLV (all models except the -2M and -Q8 models)		Complementary PNP
M18-3VNDL (all models)	750 mm with adjustment	Complementary NPN
M18-3VPDL (all models except the -2M and -Q8 models)		Complementary PNP
M18-3VNDS (all models except the -2M and -Q8 models)	300 mm with adjustment	Complementary NPN
M18-3VPDS (all models except the -2M and -Q8 models)		Complementary PNP
M18-3VNFF30-Q5	30 mm	Complementary NPN
M18-3VNFF50 (all models)	50 mm	Complementary NPN
M18-3VPFF50-2M	50 mm	Complementary PNP
M18-3VNFF75-Q5	75 mm	Complementary NPN
M18-3VNFF100-Q5	100 mm	Complementary NPN
M18-3VNFF150 (-Q5 and -Q8 models)	150 mm	Complementary NPN
M18-3VPFF150-2M		Complementary PNP

Specifications

Supply Voltage

10 V to 30 V DC for ambient temperature ≤ 55 °C

10 V to 24 V DC for ambient temperature > 55 °C

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Output Configuration

Complementary PNP or NPN by model number

Output Protection Circuitry

Protected against false pulse on power-up and continuous short circuit of outputs. Short circuit protection at elevated temperature may require a power cycle to reset.

Output Response Time

Response is independent of signal strength

Opposed mode: 1.5 milliseconds ON, 1.0 milliseconds OFF

Retro, Polarized Retro, and Diffuse: 1.5 milliseconds ON, 0.75 milliseconds OFF

Fixed-Field: 1.5 milliseconds ON, 1.0 milliseconds OFF

Delay on Power-up: 100 milliseconds; outputs do not conduct during this time

Supply Current (Exclusive of Load Current)

Diffuse: 16 mA

Opposed Mode Emitters: 17 mA

Opposed Mode Receivers: 8 mA

Retroreflective and Polarized Retroreflective: 16 mA

Fixed-Field: 16 mA

Output Rating

≤ 50 mA total current for ambient temperatures > 55 °C

≤ 100 mA total current through both outputs ≤ 55 °C

OFF-State Leakage Current: < 50 µA at 30 V dc

ON-State Saturation Voltage: < 1.5 V at 10 mA; < 3.0 V at 100 mA

Repeatability

Repeatability is independent of signal strength

Opposed mode: 170 microseconds

Retro, Polarized Retro, and Diffuse modes: 100 microseconds

Fixed-Field mode: 100 microseconds

Emitter LED

Visible red

Adjustments

Diffuse (DL, DS), Emitter (ES), Receiver (RS), Polarized Retroreflective (LPC), Retroreflective (LV) models: Single turn sensitivity (gain) adjustment potentiometer

Emitter Beam Inhibit (EJ) models: Tie black wire to 10 V to 30 V dc for beam inhibit

Construction

Housing: Nickel-plated brass

Front window: PMMA

Indicator windows: Clear Polysulfone (PSU)

Indicator cover and gain pot driver: Black PSU

Cable: PVC jacket

Short cable QD: Nickel-plated brass and PVC jacket

QD connector and mounting nuts: Nickel-plated brass

Indicators

Three LEDs (one green, two amber)

Green solid: indicates power applied and sensor ready

Green flashing: indicates a marginal sensing signal

Amber solid: indicates Pin 4 (black wire) output conducting

Environmental Rating

IEC 60529 IP67 and IP69K

Operating Conditions

Temperature: –40 °C to +70 °C (–40 °F to +158 °F)

95% at +50 °C maximum relative humidity (non-condensing)

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Vibration and Mechanical Shock

All models meet Mil. Std. 202F requirements. Method 201A (Vibration; frequency 10 to 60 Hz, max., double amplitude 0.06 in acceleration 10G). Method 213B conditions H&I (Shock: 75G with unit operating; 100G for non-operation)

Certifications

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Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN

Industrial Control Equipment 3TJJ

Class 2 power; UL Environmental Rating: Type 1

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

For additional product support, go to www.bannerengineering.com.

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	2.0	30	0.5

FCC Part 15 Class A for Unintentional Radiators

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

(Part 15.21) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Industry Canada ICES-003(A)

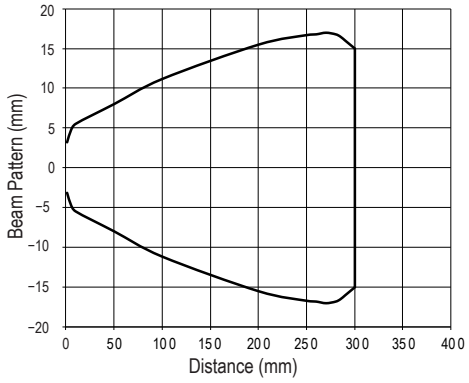
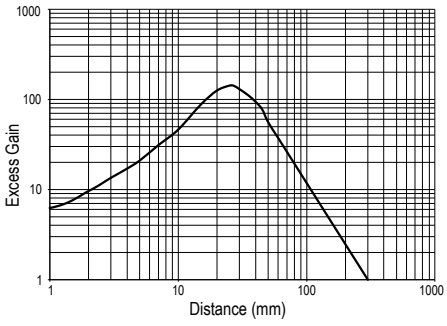
This device complies with CAN ICES-3 (A)/NMB-3(A). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(A). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.

Performance Curves

Diffuse and **fixed-field** mode sensor performance is based on the use of a 90% reflectance white test card.

Diffuse models (300 mm range)

Beam Pattern	Excess Gain
	

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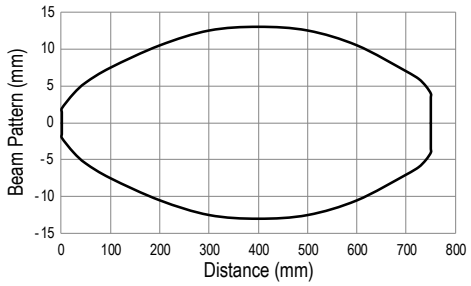
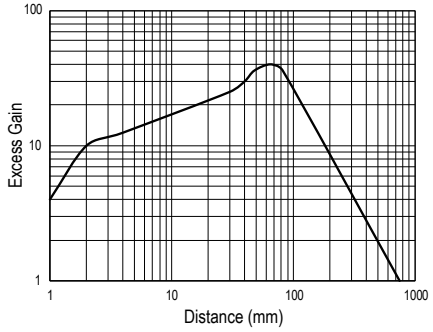
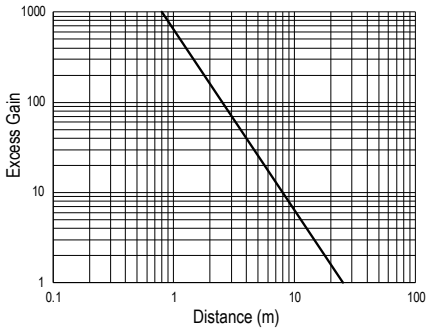
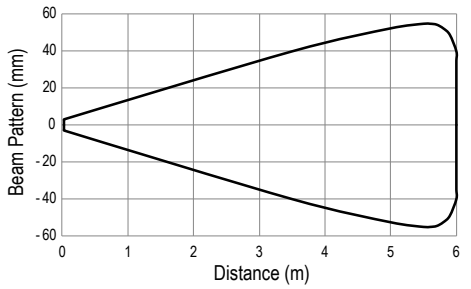
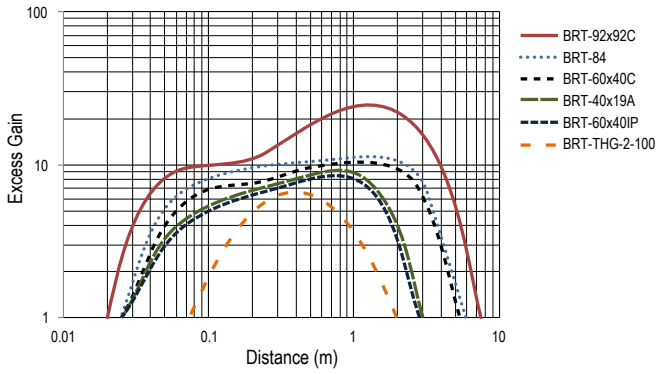
Diffuse models (750 mm range)

Beam Pattern	Excess Gain
	

Emitter/receiver models (effective beam size: 15.2 mm)

Beam Pattern	Excess Gain
	

Polarized retroreflective models

Beam Pattern	Excess Gain
	

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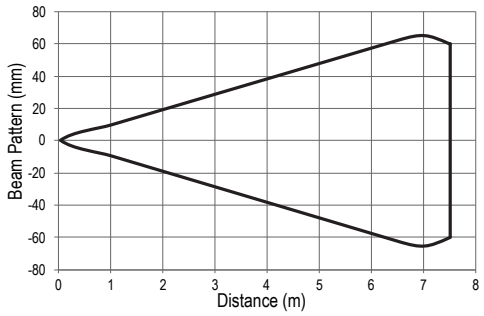
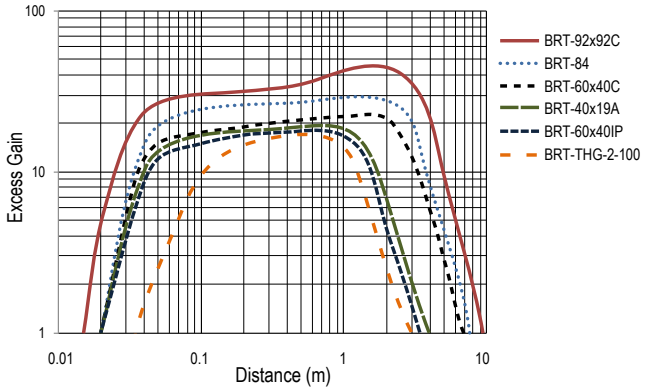
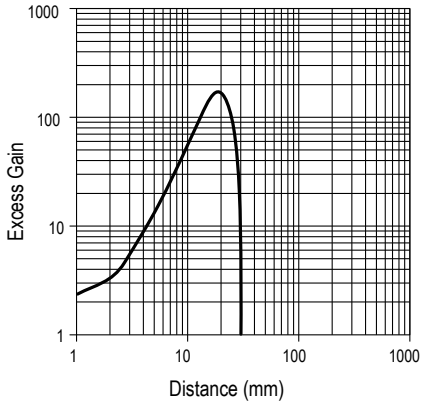
Retroreflective models

Beam Pattern	Excess Gain
	

Fixed-field models

Excess Gain

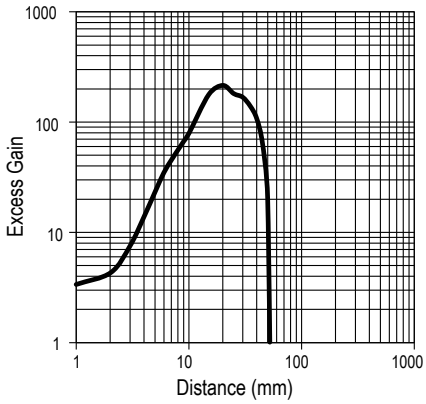


M18-3FF30

Emitter Image Size: 4.0 mm square at 15 mm and 3.5 mm square at 30 mm

18% Gray Test Card: Cutoff distance will be 98% of value shown

6% Black Test Card: Cutoff distance will be 95% of value shown



M18-3FF50

Emitter Image Size: 4 mm square at 25 mm and 3 mm square at 50 mm

18% Gray Test Card: Cutoff distance will be 98% of value shown

6% Black Test Card: Cutoff distance will be 95% of value shown

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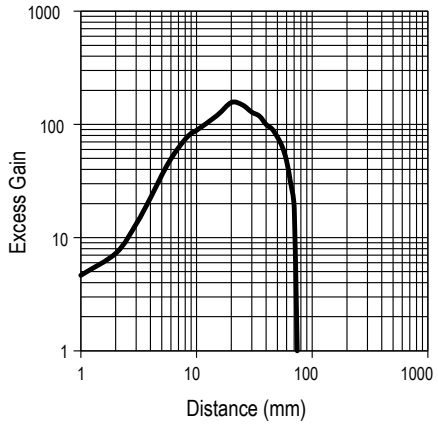
Excess Gain

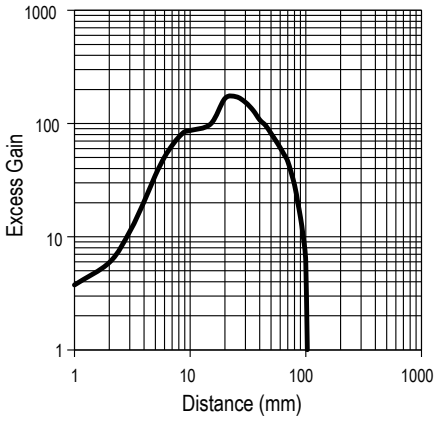


M18-3FF75

Emitter Image Size: 4.5 mm square at 37 mm and 4.0 mm square at 75 mm

18% Gray Test Card: Cutoff distance will be 98% of value shown

6% Black Test Card: Cutoff distance will be 95% of value shown

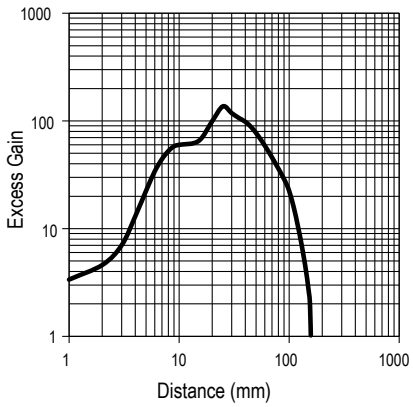


M18-3FF100

Emitter Image Size: 4.5 mm square at 50 mm and 4.5 mm square at 100 mm

18% Gray Test Card: Cutoff distance will be 95% of value shown

6% Black Test Card: Cutoff distance will be 90% of value shown

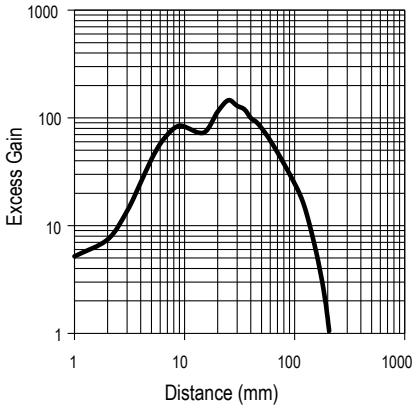


M18-3FF150

Emitter Image Size: 5 mm square at 75 mm and 8 mm square at 150 mm

18% Gray Test Card: Cutoff distance will be 90% of value shown

6% Black Test Card: Cutoff distance will be 70% of value shown



M18-3FF200

Emitter Image Size: 5 mm square at 100 mm and 8 mm square at 200 mm

18% Gray Test Card: Cutoff distance will be 85% of value shown

6% Black Test Card: Cutoff distance will be 60% of value shown

Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

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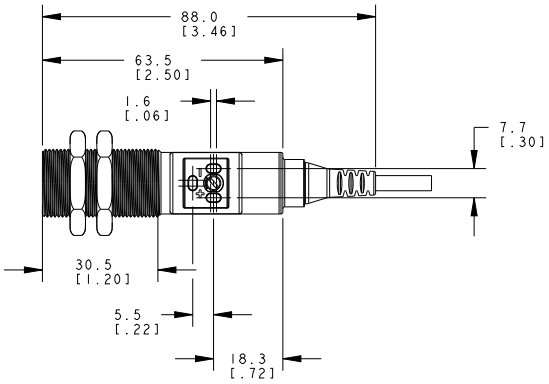
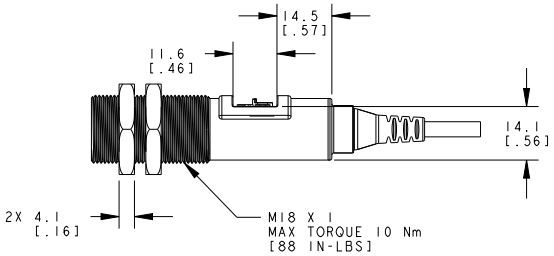
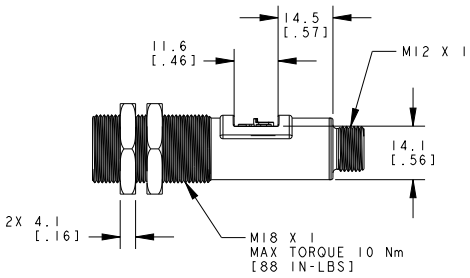
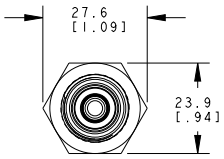
Cable Models





QD Models





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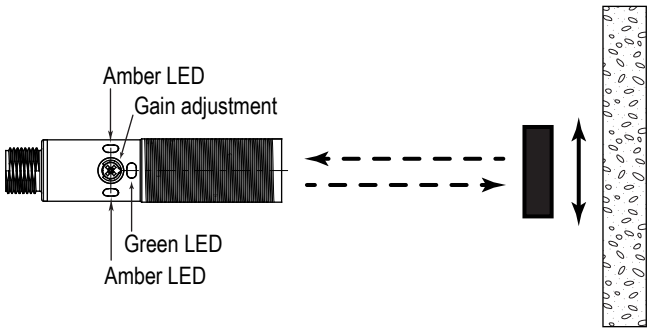
Chapter 2 Install the M18-3 Barrel Sensor

M18-3 Features and Installation

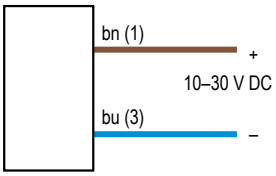


To install the M18-3 Barrel Sensor:

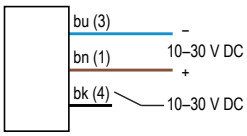
1. Align the sensor as required for the application. For the most sensitive object detection, align the sensor so that the objects move across the sensor's axis.
2. Secure the sensor to a bracket.
3. Wire sensor as shown in the wiring diagrams.
4. Adjust the gain adjuster (sensitivity pot) if necessary.

Wiring Diagrams

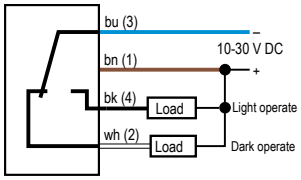
Emitter



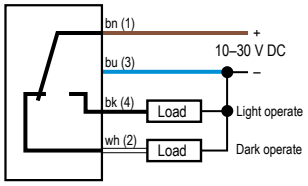
Emitter with Active High Beam Inhibit



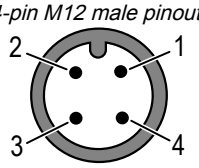
Complementary NPN



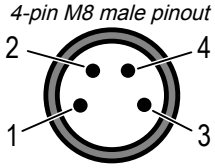
Complementary PNP



4-pin M12 male pinout



4-pin M8 male pinout



Key

1. Brown
2. White
3. Blue
4. Black

NOTE: Open lead wires must be connected to a terminal block.

In light operate (LO) mode, the output is ON when the target returns the same or more light to the sensor and OFF when the sensor detects less light than the configured/taught target. In **opposed and retroreflective sensing modes**, light operate is active when the beam is unblocked. In **diffuse, fixed field, and adjustable field sensor modes**, light operate is active when the target is present.

In dark operate (DO) mode, the output is ON when the target returns less light to the sensor than the configured target and OFF when the sensor detects more light than the configured/taught target. In **opposed and retroreflective sensing modes**,

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dark operate is active when the beam is blocked. In **diffuse, fixed field, and adjustable field sensor modes**, dark operate is active when the target is absent.

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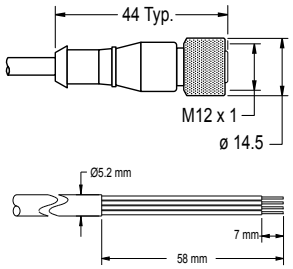
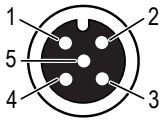
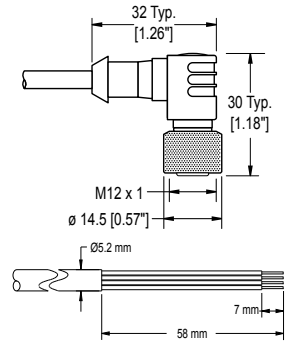
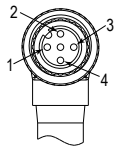
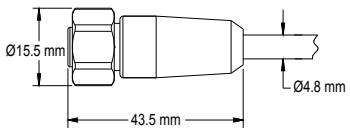
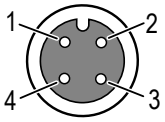
Chapter 3 Accessories

Cordsets

All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

4-Pin Single-Ended M12 Female Cordsets					
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**	
MQDC-406	2 m (6.56 ft)	Straight			1 = Brown 2 = White 3 = Blue 4 = Black 5 = Not used c UL us
MQDC-415	5 m (16.4 ft)				
MQDC-430	9 m (29.5 ft)				
MQDC-450	15 m (49.2 ft)				
MQDC-406RA	2 m (6.56 ft)	Right-Angle			
MQDC-415RA	5 m (16.4 ft)				
MQDC-430RA	9 m (29.5 ft)				
MQDC-450RA	15 m (49.2 ft)				

Washdown Cordsets

4-Pin Single-Ended M12 Female Washdown, Stainless Steel Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC-WDSS-0406	2 m (6.56 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
MQDC-WDSS-0415	5 m (16.4 ft)			
MQDC-WDSS-0430	9 m (29.5 ft)			

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Apertures

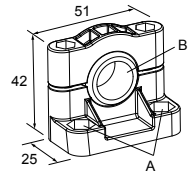
Model	Units	Aperture Description	Product
AP18SCN	3	Kit includes black acetal round apertures of 0.5 mm (0.02 in), 1.0 mm (0.04 in), and 2.5 mm (0.10 in) diameter.	
AP18SRN	3	Kit includes black acetal rectangular apertures of 0.5 mm (0.02 in), 1.0 mm (0.04 in), and 2.5 mm (0.10 in) wide. Each kit also includes a thread-on housing, Teflon® FEP® lens, and o-ring.	
APG18S	1	Kit with glass lens to protect plastic sensor lens from chemical environments and weld splatter damage.	

Brackets

SMB18SF

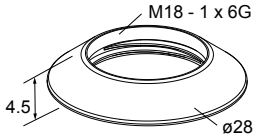
- 18 mm swivel bracket with M18 × 1 internal thread
- Black thermoplastic polyester
- Stainless steel swivel locking hardware included
- CAD Files: DXF, PDF, IGS, STP

Hole center spacing: A = 36.0
Hole size: A = ø 5.3, B = ø 18.0



SMBS18-2-1

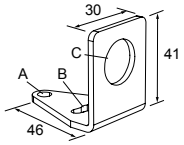
- 30% glass-filled PBT
- CAD Files: DXF, PDF, IGS, STP



SMB18A

- Right-angle mounting bracket with a curved slot for versatile orientation
- 12-ga. stainless steel
- 18 mm sensor mounting hole
- Clearance for M4 (#8) hardware
- CAD Files: DXF, PDF, IGS, STP

Hole center spacing: A to B = 24.2
Hole size: A = ø 4.6, B = 17.0 × 4.6, C = ø 18.5



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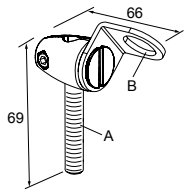
SMB18FA..

- Swivel bracket with tilt and pan movement for precision adjustment
- Easy sensor mounting to extruded rail T-slots
- Metric and inch size bolts available
- 18 mm sensor mounting hole

Hole size: B=ø 18.1

Bolt Thread (A):

SMB18FA = 3/8 - 16 × 2 in
CAD Files: DXF, PDF, IGS, STP
SMB18FAM10 = M10 - 1.5 × 50
CAD Files: DXF, PDF, IGS, STP
SMB18FAM12 = n/a; no bolt included. Mounts directly to 12 mm (½ in) rods
CAD Files: DXF, PDF, IGS, STP



For additional brackets, check the current Banner catalog or visit www.bannerengineering.com. All measurements are listed in millimeters, unless noted otherwise. The measurements provided are subject to change.

Reflectors

BRT-2X2

- Square, acrylic target
- Reflectivity factor: 1.0
- Maximum temperature: +50 °C (+122 ºF)
- Optional brackets are available
- Reflector size: 51 mm × 51 mm
- Approximate size: 51.3 mm × 61 mm
- Two 4.2 mm diameter slots for mounting
- CAD files: DXF, PDF, IGS, STP

BRT-2X2-25 Qty 25

BRT-2X2-100 Qty 100



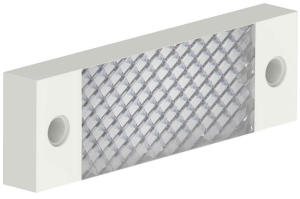
BRT-84X84A

- Square, acrylic target
- Reflectivity Factor: 2.0
- Temperature: –20 °C to +60 °C (–4 °F to +140 °F)
- Approximate size: 84 mm × 84 mm × 9 mm
- Two 4.2 mm diameter slots for mounting
- CAD Files: DXF, PDF, IGS, STP



BRT-40X19A

- Rectangular, acrylic target
- Reflectivity Factor: 1.3
- Temperature: –20 °C to +60 °C (–4 °F to +140 °F)
- Reflector size: 18 mm × 40 mm
- Approximate size: 18 mm × 60 mm × 7.3 mm
- Two 4 mm diameter mounting holes, 50 mm centers
- CAD Files: DXF, PDF, IGS, STP



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BRT-60X40C and **BRT-60X40CM** (Microprism) • Rectangular, acrylic target • Reflectivity Factor: 1.4 • Temperature: –20 °C to +60 °C (–4 °F to +140 °F) • Optional brackets are available • Approximate size: 40 mm × 60 mm • **BRT-60X40C** CAD Files: DXF, PDF, IGS, STP • **BRT-60X40CM** CAD Files: DXF, PDF, IGS, STP	
BRT-84 • Round, acrylic target • Reflectivity Factor: 1.4 • Temperature: –20 °C to +60 °C (–4 °F to +140 °F) • Optional brackets are available • Size: 84 mm diameter • Mounting Hole: 4.5 mm diameter • CAD files: DXF, PDF, IGS, STP	

Retroreflective Tape

Model	Reflectivity Factor	Maximum Temperature	Size
BRT-THG-2-100	0.7	+60 °C (+140 °F)	50 mm (2 in) wide, 2.5 m (100 in) long

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Chapter 4 Product Support and Maintenance

Repairs and Translations (No Field-Replaceable Parts)

English

Contact Banner Engineering for troubleshooting of this device. **Do not attempt any repairs to this Banner device; it contains no field-replaceable parts or components.** If the device, device part, or device component is determined to be defective by a Banner Applications Engineer, they will advise you of Banner's RMA (Return Merchandise Authorization) procedure.

```
IMPORTANT: If instructed to return the device, pack it with care. Damage that occurs in return
shipping is not covered by warranty.
```

Obtain assistance with product repairs by contacting your local Banner Engineering Corp distributor or by calling Banner directly at (763) 544-3164. Access literature translated into your native language on the Banner website at www.bannerengineering.com or contact Banner directly at (763) 544-3164.

Deutsch

Wenden Sie sich zur Fehlerbehebung dieses Geräts an Banner Engineering. **Versuchen Sie nicht, Reparaturen an diesem Banner-Gerät vorzunehmen. Das Gerät enthält keine am Einsatzort auszuwechselnden Teile oder Komponenten.** Wenn ein Banner-Anwendungstechniker zu dem Schluss kommt, dass dieses Gerät, ein Teil oder eine Komponente davon defekt ist, erhalten Sie von dem Techniker Erläuterungen zu Banners RMA-Verfahren (Return Merchandise Authorization) für die Warenrückgabe.

```
WICHTIG: Wenn Sie der Techniker anweist, das Gerät zurückzusenden, verpacken Sie es bitte
sorgfältig. Transportschäden bei der Rücksendung werden von der Garantie nicht abgedeckt.
```

Unterstützung bei Produktreparaturen erhalten Sie von Ihrem örtlichen Banner Engineering Corp Händler oder direkt von Banner unter Tel. (763) 544-3164. Die in Ihre Muttersprache übersetzte Literatur finden Sie auf der Banner-Website unter www.bannerengineering.com oder kontaktieren Sie Banner direkt unter Tel. (763) 544-3164.

Français

Pour plus d'informations sur le dépannage du produit, contactez Banner Engineering. **Ne tentez pas de réparer ce dispositif Banner. Il ne contient aucun composant ou pièce qui puisse être remplacé sur place.** Si un ingénieur de Banner conclut que le dispositif ou l'une de ses pièces ou composants est défectueux, il vous informera de la procédure à suivre pour le retour des produits (RMA).

```
Important : Si vous devez retourner le dispositif, emballez-le avec soin. Les dégâts
occasionnés pendant le transport de retour ne sont pas couverts par la garantie.
```

Pour vous aider lors de la réparation de produits, contactez votre distributeur Banner local our appelez directement Banner au (763) 544-3164. La documentation traduite dans votre langue est disponible sur le site internet de Banner www.bannerengineering.com ou contactez directement Banner au (763) 544-3164.

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Italiano

Per le procedure di individuazione e riparazione dei guasti di questo dispositivo, contattare Banner Engineering. **Non tentare di riparare questo dispositivo Banner, in quanto non contiene parti o componenti sostituibili dall'utente.** Se il dispositivo, una parte del dispositivo o un componente del dispositivo viene riscontrato difettoso da un tecnico Banner, il nostro personale vi comunicherà la procedura da seguire per ottenere l'autorizzazione al reso.

Importante: Se si ricevono istruzioni di rispedire il dispositivo al produttore, imballarlo con cura. I danni dovuti al trasporto non sono coperti dalla garanzia.

Per assistenza nelle riparazioni dei prodotti, contattare il distributore locale Banner Engineering Corp o contattare direttamente Banner al numero (763) 544-3164. È possibile accedere alla documentazione tradotta nella propria lingua madre sul sito Web Banner all'indirizzo www.bannerengineering.com o contattare direttamente Banner al numero (763) 544-3164.

Español

Comuníquese con Banner Engineering para solucionar de problemas de este dispositivo. **No intente ninguna reparación a este dispositivo de Banner, contiene piezas o componente que no se pueden cambiar en terreno.** Si algún ingeniero de aplicaciones de Banner determina que el dispositivo, alguna de las piezas o alguno de los componentes del dispositivo está defectuoso, le informará el procedimiento de autorización de devolución de mercancía (RMA, por sus siglas en inglés) de Banner.

Importante: Si se le solicita devolver el dispositivo, empáquelo con cuidado. Puede haber daños durante el envío de devolución que no estén cubiertos por la garantía.

Para reparaciones de productos, por favor contacte a su distribuidor local de Banner Engineering o llame a Banner directamente al 00 1 (763) 544-3164. Vea la literatura traducida en su idioma en el sitio web Banner en www.bannerengineering.com o comuníquese con Banner directamente al 00 1 (763) 544-3164.

中国人

如需对本装置进行故障排查，请联系邦纳。**请勿尝试自行维修该邦纳装置；本装置不包含任何可在现场更换的部件或组件。** 若经邦纳应用工程师确认设备、设备部件或组件存在缺陷，他们将告知您邦纳退货授权 (RMA) 流程。

重要注意事项： 如被要求退回装置，请妥善包装后寄回。退货运输过程中发生的损坏不在保修范围内。

请联系当地的 Banner Engineering Corp 经销商或直接致电 Banner +1 (763) 544-3164，以获得产品维修帮助。请访问邦纳网站 www.bannerengineering.com 或直接拨打 +1 (763) 544-3164 联系邦纳，获取翻译成您母语的资料。

한국인

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重要 ： 返品を指示された場合は、装置を丁寧に梱包してください。返品時に発生した破損は保証の対象外となります。

製品の修理については、最寄りのBanner Engineering Corp代理店にお問い合わせいただくか、米国+1 (763) 544-3164まで直接お電話でお問い合わせください。バナーのウェブサイト（www.bannerengineering.com）でお客様の言語に翻訳された資料にアクセスするか、米国+1 (763) 544-3164まで直接お電話でお問い合わせください。

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čeština

Pro řešení problémů se zařízením kontaktujte společnost Banner Engineering. **Neprovádějte žádné opravy zařízení Banner. Neobsahují žádné komponenty nebo části, které by byly vyměnitelné.** Pokud je zařízení, jeho část nebo díl označen technikem společnosti Banner jako poškozený, bude Vám doporučeno vyplnit reklamační RMA protokol.

```
Důležité: Pokud byl vydán požadavek na vrácení zařízení, pečlivě ho zabalte. Poškození vzniklé
při dopravě není považováno za záruční opravu.
```

Pokud produkt potřebuje opravu, vyžádejte si pomoc od místního distributora společnosti Banner Engineering Corp nebo přímo na telefonním čísle (763) 544-3164. Dokumentaci přeloženou do vašeho jazyka si vyhledejte na webových stránkách společnosti Banner na adrese www.bannerengineering.com nebo se obraťte přímo na společnost Banner na telefonním čísle (763) 544-3164.

Polski

W celu rozwiązania problemów z urządzeniem należy skontaktować się z działem technicznym firmy Banner Engineering. **Pod żadnym pozorem nie próbuj naprawiać tego urządzenia firmy Banner; nie zawiera ono części ani elementów, które można wymieniać samodzielnie.** Jeśli urządzenie, jego część lub element zostaną uznane za wadliwe przez inżyniera technicznego Banner, poinformuje on użytkownika o firmowej procedurze zwrotu towaru (RMA) firmy Banner.

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Ważne: Jeśli urządzenie ma zostać zwrócone, należy je starannie zapakować. Uszkodzenia powstałe
podczas odsyłki nie są objęte gwarancją.
```

Aby uzyskać pomoc w zakresie naprawy produktu, należy skontaktować się z lokalnym dystrybutorem Banner Engineering Corp lub zadzwonić bezpośrednio do firmy Banner pod numer (763) 544-3164. Dostęp do literatury przetłumaczonej na swój język ojczysty można uzyskać na stronie internetowej firmy Banner pod adresem www.bannerengineering.com lub kontaktując się bezpośrednio z firmą Banner pod numerem (763) 544-3164.

Português

Entre em contato com a Engenharia da Banner para a solução de problemas deste dispositivo. **Não tente fazer nenhum reparo neste dispositivo Banner; ele não contém peças ou componentes substituíveis em campo.** Se um técnico de aplicações da Banner determinar que o dispositivo, peça ou componente do dispositivo está com defeito, ele o informará sobre o procedimento de RMA (Autorização de Devolução de Mercadoria) da Banner.

```
Importante: Se for instruído a devolver o dispositivo, embale-o com cuidado. Os danos ocorridos
no transporte de devolução não são cobertos pela garantia.
```

Obtenha assistência para reparos do produto entrando em contato com o distribuidor local da Banner Engineering Corp ou ligando diretamente para a Banner no telefone (763) 544-3164. Acesse a literatura traduzida para seu idioma nativo no site da Banner em www.bannerengineering.com ou entre em contato diretamente com a Banner pelo telefone (763) 544-3164.

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```
ÖNEMLİ: İade etmeniz istenirse, cihazı dikkatli bir şekilde paketleyin. İade nakliyesinde
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Contact Us

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